

GUIDELINE

PERFORMANCE

EXCEPTIONS & DEVIATIONS

<p>1. Procedure Development</p> <ul style="list-style-type: none"> Procedures should be developed to assist in the development and review of operations procedures and should include methods and formats for them. Procedures should be developed giving administrative and technical direction for all anticipated operations, system changes, alarm responses, and abnormal or emergency situations also giving the appropriate responses. The detail in the procedure should be consistent with the complexity of the task, the experience and training of the person performing the task, the frequency of performance, and the consequences of errors. 	<p>1. Procedure Development</p> <ul style="list-style-type: none"> Procedures exist to assist in the development and review of CAD operations procedures. These procedures include methods and formats. See CAD OPM 1.4, CAD Plans, Policies and Operating Procedures, CAD OPM 1.4.1, Format of CAD Policies, CAD OPM 1.4.2, Format of CAD Procedures, CAD OPM 1.4.4, Procedure For Implementing or Canceling Temporary Procedures, and TVDG OPM 10057, Procedure for Generating and Using TVDG Operating Procedures. Procedures exist at CAD to give administrative and technical direction for all anticipated operations, system changes, alarm responses, and abnormal or emergency situations, and also to give the appropriate responses. See CAD OPM and TVDG OPM. The detail in procedures and training is consistent with the complexity of the task, the experience and training of the person performing the task, the frequency of performance, and the consequences of errors. See CAD OPM 1.4.2, Format of CAD Procedures. 	<p>1. Procedure Development</p> <ul style="list-style-type: none"> None.
<p>2. Procedure Content</p> <p>The following requirements should be followed to assure that the content conforms to the prescribed guidelines:</p> <ul style="list-style-type: none"> Scope and applicability should be apparent. Emergency procedures should be easily distinguishable from other procedures by use of a color code. Procedures should incorporate information from appropriate reference sources. Prerequisites and initial conditions, including verification of the condition of the equipment to be used, should be detailed and set out in a place 	<p>2. Procedure Content</p> <p>The following requirements are a portion of the guidelines for procedure writing and are incorporated into CAD OPM 1.4.2, Format of CAD Procedures, and TVDG OPM 10057, Procedure for Generating and Using TVDG Operating Procedures. The procedures conform to the following guidelines:</p> <ul style="list-style-type: none"> Scope and applicability are apparent. Emergency procedures are easily distinguishable from other procedures by use of a Chapter Number. See CAD OPM Chapter 3, CAD Emergency Procedures. Procedures incorporate information from appropriate reference sources. Most notably the Standards Based Management System and the Environmental Management System. Prerequisites and initial conditions, including verification of the condition of the equipment to be used, is detailed and set out in a place within the procedure which is easily found. 	<p>2. Procedure Content</p> <ul style="list-style-type: none"> None.

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<p>within the procedure which is easily found.</p> <ul style="list-style-type: none"> • Definitions should be explained. • Procedures should be easily understood and actions clearly stated. • Procedures should contain only one action per step. • Procedures should contain sufficient but not excessive detail based on the skill level of those executing the procedure. • Warnings, notes, and cautions should be easily recognizable. • Warnings and cautions should precede the step to which they apply and appear on the same page. • Procedures should be technically and administratively accurate and include sufficient information and correct references. • Sign-offs should be provided for each critical step. • Limits and tolerances for operating parameters should be consistent with readable accuracy of instruments. • Criteria for surveillance or test procedures should be easily understood. If calculations are required, they should be explained. • Sequence of procedural steps should conform to normal or expected operational sequences. • Procedures should incorporate human factors, such as exact references to components and documents, and include highlights of operational limits, warnings, and cautions. • Emergency operating procedures should consider single and multiple causalities. • References to procedural steps unrelated to the procedure being used should be avoided. • Component or system shutdown and restoration requirements following shutdown, maintenance, or surveillance should be specified. 	<ul style="list-style-type: none"> • Definitions are explained. • Procedures are easily understood and actions clearly stated. • Procedure writers are requested to contain only one action per step. • Procedures contain sufficient but not excessive detail and are based on the skill level of those executing the procedure. • Warnings, notes, and cautions are easily recognizable. • Warnings and cautions precede the step to which they apply and appear on the same page. • Procedures are technically and administratively accurate and include sufficient information and correct references. • Sign-off is provided for critical steps where appropriate. • Limits and tolerances for operating parameters are consistent with readable accuracy of instruments. • Criteria for surveillance or test procedures are easily understood. Calculations, when required, are explained. • Sequence of procedural steps conforms to normal or expected operational sequences. • Procedures incorporate human factors, such as exact references to components and documents, and include highlights of operational limits, warnings, and cautions. • Emergency operating procedures apply to different types of events. • References to procedural steps unrelated to the procedure being used are avoided. 	

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<p>3. Procedure Changes and Revisions The review and approval process for each procedure and change should be documented. <u>Procedure changes</u> imply temporary changes, to a procedure without retyping it. <u>Procedure revisions</u> constitute the retyping and reissuance of the procedure. Changes and revisions should conform to the following:</p> <ul style="list-style-type: none"> • Procedure changes should be documented in a logbook readily available for operator reference. • Procedure changes and revisions should be made when errors or omissions are noted. • Procedure revisions should be started when a temporary change has been outstanding for a long period of time. • Procedure revisions should be implemented concurrently with modifications. • Information on changes or revisions should be communicated to operations personnel through shift briefings or through required reading. • The reasons behind important procedure steps should be documented to assure their importance is maintained. • Procedure reviews should involve a walk-through or a similar process. 	<ul style="list-style-type: none"> • Component or system shutdown and restoration requirements following shutdown, maintenance, or surveillance are specified. See CAD OPM 2.6 Series Procedures. <p>3. Procedure Changes and Revisions Procedure changes at CAD are performed under CAD OPM 1.4.5, Procedure For Implementing Hand processed Changes. Procedure revisions are performed under CAD OPM 1.4.3, Procedure For Implementing New, Revised or Canceling CAD Permanent Procedures and TVDG OPM 10057, Procedure for Generating and Using TVDG Operating Procedures. Hand Processed Changes and Revisions conform to the following:</p> <ul style="list-style-type: none"> • Procedure changes are documented in a logbook readily available for operator reference. • Procedure changes and revisions are made when errors or omissions are noted. • Procedure revisions are started simultaneously when a hand-processed change is made. • Procedure revisions are implemented concurrently with modifications. • Information on changes or revisions is communicated to operations personnel through shift briefings, classroom training or through required reading. • The reasons behind important procedure steps are generally documented in safety or design reviews. When Caution and Warning statements are used in procedures, the consequence of not following the Caution or Warning is stated. See CAD OPM 1.4.2, Format of CAD Procedures. • Procedure reviews for sweep procedures, CAD OPM 4.56 Series procedures, involve a walk-through. 	<p>3. Procedure Changes and Revisions</p> <ul style="list-style-type: none"> • None.

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CHAPTER: XVI "OPERATIONS PROCEDURES"

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<p>4. Procedure Approval</p> <ul style="list-style-type: none"> Operating procedures should be approved by the Operations Supervisor. <ul style="list-style-type: none"> Procedures which affect safety-related equipment and emergency procedures should be reviewed by the safety review committee of the department or facility. Revisions to the procedures should receive the same level of approval as the initial versions. New and revised procedures should be approved before use. Temporary changes should be approved by a least two individuals, one of whom must be the Operations Supervisor. 	<p>4. Procedure Approval</p> <ul style="list-style-type: none"> Operating procedures are approved by the CAD: Department Chair, Deputy Chair, Associate Chair for Operations, Associate Chair for ESHQ, Accelerator Division Head, Experimental Support & Facilities Division Head, ESHQ Division Head, Chief Mechanical Engineer, Chief Electrical Engineer, TVDG Group Leader <p>where appropriate. See CAD OPM 1.4, CAD Plans, Policies and Operating Procedures, CAD OPM 1.1, Authorization, and TVDG OPM 10057, Procedure for Generating and Using TVDG Operating Procedures.</p> <ul style="list-style-type: none"> Procedures which affect safety-related equipment and emergency procedures are reviewed by the appropriate CAD and/or TVDG safety review committee. See CAD OPM 9.2.1, Reviewing Conventional Safety Aspects of Experiments, CAD OPM 9.3.1, and Reviewing Conventional Safety Aspects of an Accelerator System. Revisions to the procedures receive the same level of approval as the initial versions. New and revised procedures are approved before use. See CAD OPM 1.4.3, Procedure For Implementing New, Revised or Canceling CAD Permanent Procedures. Temporary procedures and Hand Processed Changes are approved by a least two individuals, one of whom must be the CAD Head of MCR or TVDG Operations Supervisor, as appropriate, or an equivalent pertinent authority. See CAD OPM 1.4.5, Procedure For Implementing Hand processed Changes. 	<p>4. Procedure Approval</p> <ul style="list-style-type: none"> None.
<p>5. Procedure Review</p> <ul style="list-style-type: none"> Procedures should be reviewed before they are issued and at periodic intervals to assure that information is accurate and that human factors have been considered. 	<p>5. Procedure Review</p> <ul style="list-style-type: none"> Procedures are reviewed before they are issued and at three-year intervals in order to assure that information is accurate and that human factors have been considered. The Head of MCR issues temporary procedures. Temporary procedures are applicable a running period. See CAD OPM 1.4, CAD Plans, Policies and Operating Procedures. 	<p>5. Procedure Review</p> <ul style="list-style-type: none"> None.

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<ul style="list-style-type: none"> Applicable procedures should be reviewed after an unusual occurrence, or other significant event. New procedures should be walked through to ensure their workability. 	<ul style="list-style-type: none"> Applicable procedures are reviewed after an unusual occurrence, or other significant event. See CAD OPM 10.1, Occurrence Reporting and Processing of Operations Information. New procedures are walked through to ensure their workability. See CAD OPM 1.4, CAD Plans, Policies and Operating Procedures. 	
<p>6. Procedure Availability</p> <ul style="list-style-type: none"> Controlled copies of procedures should be maintained in control areas for operator reference, and in other areas as appropriate. Working copies should be controlled and a system put in place to ensure outdated procedures are replaced. 	<p>6. Procedure Availability</p> <ul style="list-style-type: none"> Controlled copies of the CAD procedures are maintained for operator reference and in other areas as appropriate. See CAD OPM 1.2, CAD Documents for Operations. Procedures are maintained on an intranet for ease of access; the Documentation and Training Manager maintains one hard copy of all procedures. See CAD OPM 1.4, CAD Plans, Policies and Operating Procedures. Working copies are not used. 	<p>6. Procedure Availability</p> <ul style="list-style-type: none"> None.
<p>7. Procedure Use</p> <ul style="list-style-type: none"> The requirements for using the procedures should be understood by all operators. Operators need not look up the emergency procedures when taking immediate actions in emergency situations, but the procedures should be reviewed immediately after to validate the action. 	<p>7. Procedure Use</p> <ul style="list-style-type: none"> The requirements for using the procedures are understood by all operators. This is accomplished through appropriate training programs, testing and procedure walkdowns. See CAD OPM 1.12, Conduct of Training Policy. Operators generally do need not look up the emergency procedures when taking immediate actions in emergency situation; however, they are reviewed immediately after to validate the action. See CAD OPM 3.1 for example. 	<p>7. Procedure Use</p> <ul style="list-style-type: none"> None.